

REMARKS

This is in response to the Office Action mailed on December 20, 2004, and the references cited therewith.

Claims 1, 6, 11, 16, 17, 27, 51, 56, 56 and 60 are amended and no claims are canceled or added; as a result, claims 1 – 60 remain pending in this application.

It will be noted that the two claims numbered 42 are in fact identical and the duplication was a mere typographical error and not a claim numbering error. The same claim was inadvertently shown twice. The claims submitted herewith exclude this duplication. It is submitted that renumbering the claims to include the typographical error will create confusion in the prosecution of the application.

§102 Rejection of the Claims

Claims 1-3, 5-8, 10-13, 15-22, 27-42, 44-46, 48-50, 52-53, 56-57, 60-61 were rejected under 35 USC § 102(e) as being anticipated by Iwamura (U.S. 6,425,081). This rejection is respectfully traversed.

Compared to Iwamura, the present invention, as defined in the enclosed amended claims, addresses the problem (see page 2, paragraph 4 of the application as filed) that each item of content must be uniquely watermarked for each user or entity to whom the content is to be distributed, leading to scaling problems where a large number of users is to receive the content. A solution to this problem is offered in providing a plurality of copies of the same content, watermarked and encrypted, wherein each complete copy is a unique combination of parts from a copy having a first watermark and parts from a copy having a second watermark. Thus, it may only be necessary to prepare a limited number of encrypted copies of at least part of the content with their own unique watermarks embedded in them. By generating unique combinations of parts from the limited number of copies, a much larger number of uniquely watermarked copies

Iwamura does not teach or suggest the feature of combining parts of the encrypted copy with the first watermark and parts of the encrypted copy with the second watermark into the encrypted copy of the content. By contrast, Iwamura teaches (column 10, lines 31-40) that a first entity embeds an electronic watermark in digital information before a first encryption process and that the **resultant** (line 33) digital information is transmitted to a second entity which embeds an electronic watermark in the **resultant** digital information before a second encryption process. Thus, there is no mention of combining parts of an encrypted partial or complete copy of the content with a second watermark with those of an encrypted partial or complete copy with a first watermark into an encrypted copy of the complete content. The known encrypted copy of the content is not a combination, but a twice encrypted and watermarked complete copy of the content.

As can clearly be seen in Figure 5, Iwamura describes a server 10 where image data is watermarked and primary enciphered **and then sent** to the user 20 **prior to any further processing**. The user 20 then performs secondary enciphering 24 and **then transmits the data back to the server 11** where decoding takes place and a second watermark is embedded 15. Thus, in Iwamura, the image with the first watermark (and enciphered) gets a second watermark.

Claim 1, as amended, reads as follows:

A computer-implemented method for providing an encrypted copy of content comprising:
prior to communication of the encrypted copy of the content,
encrypting a copy of at least one part of the content having a first watermark;
encrypting a copy of at least one part of the content having a second watermark;
and
combining parts of the encrypted copy with the first watermark and parts of the encrypted copy with the second watermark into the encrypted copy of the content in a manner unique for an individual client.

It is submitted that the cited portions of Iwamura (Col. 11, lines 35-50, Fig 5, and Col. 10, lines 31-70) do not describe or even suggest all the limitation of claim 1. For example,

Iwamura does not describe the limitations of “encrypting a copy of at least one part of the content having a first watermark; encrypting a copy of at least one part of the content having a second watermark; and combining parts of the encrypted copy with the first watermark and parts of the encrypted copy with the second watermark into the encrypted copy of the content in a manner unique for an individual client.” In stark contrast to this, Iwamura enciphers and adds a second watermark to an enciphered and watermarked first copy.

In view of the remarks above, it is submitted that claim 1 is allowable. As claims 2-5 are dependent upon claim 1, they are also allowable. In view of the remarks above it is also submitted that claim 16 is allowable. Further, in view of the remarks above, it is also submitted that claim 27 is also allowable. As claims 28-31 are dependent upon claim 27, they are also allowable

Claim 6, as amended, includes the limitation “to combine parts of the encrypted copy with the first watermark and parts of the encrypted copy with the second watermark in a manner unique for an individual client.” In view of the remarks above, it is also submitted that claim 6 is allowable. As claims 7-10 are dependent upon claim 6, they are also allowable.

Claim 11 reads as follows:

A computing system for providing an encrypted copy of content comprising:

means for storing the content; and

means for encrypting a copy of at least one part of the content having a first watermark, a copy of at least one part of the content having a second watermark; and

means for combining parts of the encrypted copy with the first watermark and parts of the encrypted copy with the second watermark into the encrypted copy of the content in a manner unique for an individual client..

In view of the remarks above, it is also submitted that claim 11 is allowable. As claims 12-15 are dependent upon claim 11, they are also allowable.

Claim 17 reads as follows:

A digital processing system for providing an encrypted copy of content comprising:

a storage device to store an encrypted copy of at least one part of the content watermarked with a first identifier and an encrypted copy of at least one part of the content watermarked with a second identifier; and

a processing unit coupled to the storage device, the processing unit to combine parts of the encrypted copy watermarked with the first and second identifiers into the encrypted copy of the content in a manner unique to an individual client.

In view of the remarks above, it is also submitted that claim 17 is also allowable. As claims 18-22 are dependent upon claim 17, they are also allowable.

Claim 32 reads as follows:

A server comprising:

a storage device to store content;

a processing unit to watermark redundant parts in the content with one or more unique watermarks, to encrypt the watermarked redundant parts using a unique key for each unique watermark and the remaining parts of the stream of content with a common key, and to combine the encrypted parts into a single stream of data.

The Office Action cites Fig. 5, Col 10, lines 31-37; Col. 25, lines 10-15 of Iwamura as disclosing the limitations of claim 32. However, the cited references in Iwamura in no way describe or even suggest the limitation of “a processing unit to watermark redundant parts in the content with one or more unique watermarks, to encrypt the watermarked redundant parts using a unique key for each unique watermark and the remaining parts of the stream of content with a common key, and to combine the encrypted parts into a single stream of data.”

In view of the above it is submitted that claim 32 is allowable. As claims 33- 36 are dependent upon claim 32, they are also allowable. It is also submitted in view of the remarks

above that claims 37 and 42 are allowable and, as claims 38-41 are dependent upon claim 37 they are also allowable.

Claim 43 reads as follows:

A method of distributing content, the method comprising:

watermarking first and second duplicates of a content portion with first and second identifiers respectively;

encrypting each of the first and second duplicates of the content portion with at least first and second keys respectively;

supplying both the first and second duplicates of the content portion to first and second users; and

supplying at least the first key to the first user and the second key to the second user, so that the first user is enabled to decrypt the first duplicate of the content portion watermarked with the first identifier, and so that the second user is enabled to decrypt the second duplicate of the content portion watermarked with the second identifier.

In Iwamura Fig 5, a single user is shown and not a first and second user as set out in claim 43. Further, it is submitted that Iwamura does not describe or even suggest the limitation of “supplying at least the first key to the first user and the second key to the second user, so that the first user is enabled to decrypt the first duplicate of the content portion watermarked with the first identifier, and so that the second user is enabled to decrypt the second duplicate of the content portion watermarked with the second identifier.”

In view of the above it is submitted that claim 43 is allowable. As claims 44- 46 are dependent upon claim 43, they are also allowable. It is also submitted in view of the remarks above that claims 47 and 51 are allowable and, as claims 48-50 are dependent upon claim 47 they are also allowable.

Claim 52 reads as follows:

A method of distributing content, the method comprising:

watermarking multiple sets of duplicated content portions with multiple sets of identifiers, each identifier of each set being unique to a specific duplicated content portion;

encrypting each duplicated content portion within each set with a respective key of a plurality of keys;

supplying the multiple sets of duplicated content portions to multiple users; and

supplying a unique set of keys, selected from the plurality of keys, to each of the multiple users so that each of the multiple users is enabled to decrypt the multiple sets of duplicated content portions to generate content embodying a unique sequence of identifiers.

The combination of the above limitations is also not described or even suggested in Iwamura. For example, Iwamura does not teach the limitation of “supplying a unique set of keys, selected from the plurality of keys, to each of the multiple users so that each of the multiple users is enabled to decrypt the multiple sets of duplicated content portions to generate content embodying a unique sequence of identifiers.” Accordingly, it is submitted that claim 52 is allowable. As claims 53-55 are dependent upon claim 52 they are also allowable. In view of the aforementioned, it is also submitted that claims 56 and 60 are allowable and, as claims 57-59 are dependent upon claim 56 they are also allowable.

It should be noted that the hash function H1 in Iwamura is not equivalent to encryption. A hash is a one-way function, whereas encryption of content implies that decryption is also possible. At no point in the scheme illustrated in Fig. 5 of Iwamura is a further copy of image data G provided with a watermark differing from U and encrypted by means of any other encryption process than E1 and E2.

§103 Rejection of the Claims

Claims 4, 9, 14, 47, 51, 54-55, 58, 59 were rejected under 35 USC § 103(a) as being unpatentable over Iwamura.

These claims, either directly or indirectly depend upon allowable claims and are thus also allowable.

Allowable Subject Matter

Applicants thank the Examiner for allowance of claims 24-26.

Conclusion

Applicants respectfully submit that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney at 408-705 2698 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

MARK ANDREW GEORGE WHITE ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

P.O. Box 2938

Minneapolis, MN 55402

408-333-9972

Date 04/20/05

By 

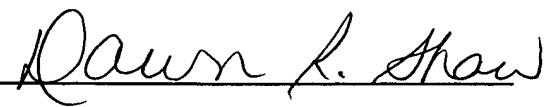
Andre L. Marais

Reg. No. 48,095

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 20 day of April, 2005.

Dawn R. Shaw

Name



Signature